

10/500216

DT04 Rec'd PCT/PTO 24 JUN 2004

SEQUENCE LISTING

<110> Takeda Chemical Industries, Ltd.

<120> Preventives/Remedies For Cancer

<130> P02-0148PCT

<150> JP2001-398220

<151> 2001-12-27

<160> 19

<210> 1

<211> 412

<212> PRT

<213> Human

<400> 1

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ala | Glu | Asn | Leu | Lys | Gly | Cys | Ser | Val | Cys | Cys | Lys | Ser | Ser | Trp |
| | | | 5 | | | | | | 10 | | | | | 15 | |
| Asn | Gln | Leu | Gln | Asp | Leu | Cys | Arg | Leu | Ala | Lys | Leu | Ser | Cys | Pro | Ala |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Leu | Gly | Ile | Ser | Lys | Arg | Asn | Leu | Tyr | Asp | Phe | Glu | Val | Glu | Tyr | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Asp | Tyr | Lys | Lys | Ile | Arg | Glu | Gln | Glu | Tyr | Tyr | Leu | Val | Lys | Trp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Gly | Tyr | Pro | Asp | Ser | Glu | Ser | Thr | Trp | Glu | Pro | Arg | Gln | Asn | Leu |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Lys | Cys | Val | Arg | Ile | Leu | Lys | Gln | Phe | His | Lys | Asp | Leu | Glu | Arg | Glu |
| | | | 85 | | | | | 90 | | | | | | 95 | |
| Leu | Leu | Arg | Arg | His | His | Arg | Ser | Lys | Thr | Pro | Arg | His | Leu | Asp | Pro |
| | | 100 | | | | | | 105 | | | | | 110 | | |
| Ser | Leu | Ala | Asn | Tyr | Leu | Val | Gln | Lys | Ala | Lys | Gln | Arg | Arg | Ala | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Arg | Arg | Trp | Glu | Gln | Glu | Leu | Asn | Ala | Lys | Arg | Ser | His | Leu | Gly | Arg |
| | | 130 | | | | 135 | | | | | 140 | | | | |
| Ile | Thr | Val | Glu | Asn | Glu | Val | Asp | Leu | Asp | Gly | Pro | Pro | Arg | Ala | Phe |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Val | Tyr | Ile | Asn | Glu | Tyr | Arg | Val | Gly | Glu | Gly | Ile | Thr | Leu | Asn | Gln |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Val | Ala | Val | Gly | Cys | Glu | Cys | Gln | Asp | Cys | Leu | Trp | Ala | Pro | Thr | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gly | Cys | Cys | Pro | Gly | Ala | Ser | Leu | His | Lys | Phe | Ala | Tyr | Asn | Asp | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Gln | Val | Arg | Leu | Arg | Ala | Gly | Leu | Pro | Ile | Tyr | Glu | Cys | Asn | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Arg | Cys | Arg | Cys | Gly | Tyr | Asp | Cys | Pro | Asn | Arg | Val | Val | Gln | Lys | Gly |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Ile | Arg | Tyr | Asp | Leu | Cys | Ile | Phe | Arg | Thr | Asp | Asp | Gly | Arg | Gly | Trp |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Gly | Val | Arg | Thr | Leu | Glu | Lys | Ile | Arg | Lys | Asn | Ser | Phe | Val | Met | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Tyr | Val | Gly | Glu | Ile | Ile | Thr | Ser | Glu | Glu | Ala | Glu | Arg | Arg | Gly | Gln |

| | | | | | |
|---------------------|-------------------------|---------------------|---------------------|--|-----|
| | 275 | | 280 | | 285 |
| Ile Tyr | Asp Arg Gln Gly | Ala Thr Tyr Leu Phe | Asp Leu Asp Tyr Val | | |
| 290 | | 295 | 300 | | |
| Glu Asp Val Tyr Thr | Val Asp Ala Ala Tyr Tyr | Gly Asn Ile Ser His | | | |
| 305 | | 310 | 315 | | 320 |
| Phe Val Asn His Ser | Cys Asp Pro Asn Leu Gln | Val Tyr Asn Val Phe | | | |
| | 325 | | 330 | | 335 |
| Ile Asp Asn Leu Asp | Glu Arg Leu Pro Arg Ile | Ala Phe Phe Ala Thr | | | |
| | 340 | | 345 | | 350 |
| Arg Thr Ile Arg Ala | Gly Glu Glu Leu Thr Phe | Asp Tyr Asn Met Gln | | | |
| | 355 | | 360 | | 365 |
| Val Asp Pro Val Asp | Met Glu Ser Thr Arg Met | Asp Ser Asn Phe Gly | | | |
| | 370 | | 375 | | 380 |
| Leu Ala Gly Leu Pro | Gly Ser Pro Lys Lys Arg | Val Arg Ile Glu Cys | | | |
| 385 | | 390 | 395 | | 400 |
| Lys Cys Gly Thr Glu | Ser Cys Arg Lys Tyr | Leu Phe | | | |
| | 405 | | 410 | | |

<210> 2
 <211> 1236
 <212> DNA
 <213> Human

<400> 2

| | | | | | | |
|-------------|------------|------------|------------|------------|-------------|------|
| atggcggaaa | atttaaaagg | ctgcagcgtg | tgttgcaagt | cttcttggaa | tcagctgcag | 60 |
| gacctgtgcc | gcctggccaa | gctctcctgc | cctgccctcg | gtatctctaa | gaggaacctc | 120 |
| tatgactttg | aagtcgagta | cctgtgcgat | tacaagaaga | tccgcgaaca | ggaatattac | 180 |
| ctgggtgaaat | ggcgtggata | tccagactca | gagagcacct | gggagccacg | gcagaatctc | 240 |
| aagtgtgtgc | gtatcctcaa | gcagttccac | aaggacttag | aaagggagct | gctccggcgg | 300 |
| caccaccggt | caaagacccc | cggcacctg | gacccaagct | tggccaacta | cctggtgcag | 360 |
| aaggccaagc | agaggcgggc | gctccgtcgc | tgggagcagg | agctcaatgc | caagcgcagc | 420 |
| catctgggac | gcatcactgt | agagaatgag | gtggacctgg | acggccctcc | gcgggccttc | 480 |
| gtgtacatca | atgagtaccg | tgttggtgag | ggcatcaccc | tcaaccaggt | ggctgtgggc | 540 |
| tgcgagtgcc | aggactgtct | gtgggcaccc | actggaggct | gctgcccggg | ggcgctcactg | 600 |
| cacaagtttg | cctacaatga | ccagggccag | gtgcggcttc | gagccgggct | gcccatctac | 660 |
| gagtgcgaact | cccgtctgcc | ctgcggctat | gactgcccaa | atcgtgttgt | acagaagggt | 720 |
| atccgatatg | acctctgcat | cttccggacg | gatgatgggc | gtggctgggg | cgtccgcacc | 780 |
| ctggagaaga | ttcgcaagaa | cagcttcgtc | atggagtacg | tgggagagat | cattacctca | 840 |
| gaggaggcag | agcggcgggg | ccagatctac | gaccgtcagg | gcgccaccta | cctctttgac | 900 |
| ctggactacg | tggaggacgt | gtacaccgtg | gatgccgcct | actatggcaa | catctcccac | 960 |
| tttgtcaacc | acagttgtga | ccccaacctg | caggtgtaca | acgtcttcat | agacaacctt | 1020 |
| gacgagcggc | tgccccgcat | cgctttcttt | gccacaagaa | ccatccgggc | aggcgaggag | 1080 |
| ctcacctttg | attacaacat | gcaagtggac | cccgtggaca | tggagagcac | ccgcatggac | 1140 |
| tccaactttg | gcctggcttg | gctccctggc | tcccctaaga | agcgggtccg | tattgaatgc | 1200 |
| aagtgtggga | ctgagtcctg | ccgcaaatac | ctcttc | | | 1236 |

<210> 3
 <211> 2754
 <212> DNA
 <213> Human

<400> 3

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| ggcacgaggc | gagaggccgg | ctaggcccga | atgtcgttag | ccgtggggaa | agatggcgga | 60 |
| aaattttaaa | ggctgcagcg | tgtgttgcaa | gtcttcttgg | aatcagctgc | aggacctgtg | 120 |
| ccgcctggcc | aagctctcct | gccctgccct | cggtatctct | aagaggaacc | tctatgactt | 180 |
| tgaagtgcag | tacctgtgcg | attacaagaa | gatccgcgaa | caggaatatt | acctggtgaa | 240 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| atggcgtgga | tatccagact | cagagagcac | ctgggagcca | cggcagaatc | tcaagtgtgt | 300 |
| gcgtatcctc | aagcagttcc | acaaggactt | agaaaaggag | ctgctccggc | ggcaccaccg | 360 |
| gtcaaagacc | ccccggcacc | tggacccaag | cttggccaac | tacctggtgc | agaaggccaa | 420 |
| gcagaggcgg | gcgctccgtc | gctgggagca | ggagctcaat | gccaaagcga | gccatctggg | 480 |
| acgcatact | gtagagaatg | agggtggacct | ggacggccct | ccgcgggcct | tcgtgtacat | 540 |
| caatgagtac | cgtgttgggtg | agggcatacac | cctcaaccag | gtggctgtgg | gctgcgagtg | 600 |
| ccaggactgt | ctgtgggcac | ccactggagg | ctgctgccc | ggggcgtcac | tgcaaaagt | 660 |
| tgcctacaat | gaccagggcc | agggtgcggct | tcgagccggg | ctgcccactc | acgagtgc | 720 |
| ctcccgcgtg | cgctgcccgt | atgactgccc | aaatcgtgtg | gtacagaagg | gtatccgata | 780 |
| tgacctctgc | atcttccgca | cggatgatgg | gcgtggctgg | ggcgtccgca | ccctggagaa | 840 |
| gattcgcaag | aacagcttcg | tcatggagta | cgtgggagag | atcattacct | cagaggaggc | 900 |
| agagcggcgg | ggccagatct | acgaccgtca | gggcgccacc | tacctctttg | acctggacta | 960 |
| cgtggaggac | gtgtacaccg | tggatgccgc | ctactatggc | aacatctccc | actttgtcaa | 1020 |
| ccacagttgt | gaccccaacc | tgcagggtgta | caacgtcttc | atagacaacc | ttgacgagcg | 1080 |
| gctgccccgc | atcgctttct | ttgccacaag | aaccatccgg | gcaggcgagg | agctcacctt | 1140 |
| tgattacaac | atgcaagtgg | accccggtga | catggagagc | acccgcatgg | actccaactt | 1200 |
| tggcctggct | gggctccctg | gctcccctaa | gaagcgggtc | cgtattgaat | gcaagtgtgg | 1260 |
| gactgagtc | tgccgcaaat | acctcttcta | gcccttagaa | gtctgaggcc | agactgactg | 1320 |
| agggggcctg | aagctacatg | cacctccccc | actgctgccc | tcctgtcgag | aatgactgcc | 1380 |
| agggcctcgc | ctgcctccac | ctgcccccac | ctgctcctac | ctgctctacg | ttcagggtctg | 1440 |
| tggccgtggt | gaggaccgac | tccaggagtc | ccctttccct | gtcccagccc | catctgtggg | 1500 |
| ttgcacttac | aaacccccac | ccaccttcag | aaatagtttt | tcaacatcaa | gactctctgt | 1560 |
| cgttgggatt | catggcctat | taaggaggtc | caagggtgta | gtcccaaccc | agccccagaa | 1620 |
| tatatattgt | tttgcacctg | cttctgcctg | gagattgagg | ggtctgctgc | aggcctcctc | 1680 |
| cctgctgccc | caaaggatag | gggaagcaac | cccagagcag | gcagacatca | gaggccagag | 1740 |
| tgcctagccc | gacatgaagc | tggttcccca | accacagaaa | ctttgtacta | gtgaaagaaa | 1800 |
| gggggtccct | gggctacggg | ctgaggctgg | tttctgctcg | tgcttacagt | gctgggtagt | 1860 |
| gttggcccta | agagctgtag | ggctcttctt | tcagggtctgc | atatctgaga | agtggatgcc | 1920 |
| cacatgccac | tggaaaggga | gtgggtgtcc | atgggccact | gagcagtgag | aggaaggcag | 1980 |
| tgcagagctg | gccagccctg | gaggtaggct | gggaccaagc | tctgccttca | cagtgcagtg | 2040 |
| aaggctaccta | gggctcttgg | gagctctgcg | gttgctaggg | gccctgacct | ggggtgtcat | 2100 |
| gaccgctgac | accactcaga | gctggaacca | agatctagat | agtccgtaga | tagcacttag | 2160 |
| gacaagaatg | tgcattgatg | gggtggtgat | gagggtgccag | gcactgggta | gagcacctgg | 2220 |
| tccacgtgga | ttgtctcagg | gaagccttga | aaaccacgga | ggtggatgcc | aggaaaaggc | 2280 |
| ccatgtggca | gaaggcaaa | tacaggccaa | gaattggggg | tgggggagat | ggcttcccca | 2340 |
| ctatgggatg | acgaggcgag | agggaagccc | ttgctgcctg | ccattcccag | accccagccc | 2400 |
| tttgtgtcta | ccctggttcc | actggtctca | aaagtcacct | gcctacaaat | gtacaaaagg | 2460 |
| cgaaggttct | gatggctgcc | ttgctccttg | ctccccacc | ccctgtgagg | acttctctag | 2520 |
| gaagtccttc | ctgactacct | gtgccagag | tgcccctaca | tgagactgta | tgccctgcta | 2580 |
| tcagatgcc | gatctatgtg | tctgtctgtg | tgtccatccc | gccgacccc | cagactaacc | 2640 |
| tcagggcata | gactgaatct | ggttctcctc | ttgtacaccc | ctcaacccta | tgcagcctgg | 2700 |
| agtgggcata | aataaaatga | actgtcgact | gaaaaaaaa | aaaaaaaaa | aaaa | 2754 |

<210> 4

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 4

atgcgtccca gatggctgcg

20

<210> 5

<211> 20

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 5
 gcgtcggtag accctgcgta

20

<210> 6
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 6
 aaccttgacg agcggctg

18

<210> 7
 <211> 14
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 7
 tcgcctgccg gatg

14

<210> 8
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Probe

<400> 8
 ccgcatcgct ttctttgccca caa

23

<210> 9
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 9
 ggaaagatgg cggaaaattt aaaa

24

<210> 10
 <211> 24
 <212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 10

gggctagaag aggtatttgc ggca

24

<210> 11

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 11

ccggaattcg cggaaaattt aaaaggctgc a

31

<210> 12

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 12

ccgctcgagc tagaagaggt atttgcggc

29

<210> 13

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 13

ccgctcgagc tagccacacag ccacctggtt ga

32

<210> 14

<211> 113

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 14

ggggtaccaa gatggagcag aaactcatct ctgaagagga tctggagcag aaactcatct
ctgaagagga tctggagcag aaactcatct ctgaagagga tctggaattc cgg

60

113

<210> 15

<211> 113

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 15

ccggaattcc agatcctctt cagagatgag ttctgtctcc agatcctctt cagagatgag 60
ttctgtctcc agatcctctt cagagatgag ttctgtctcc atcttggtac ccc 113

<210> 16

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 16

tgtgtgcgta tctcaagca gttc 24

<210> 17

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 17

ctagaagagg tatttgcggc agga 24

<210> 18

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 18

gtcgtagcc gtggggaaaag atgg 24

<210> 19

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 19

atatgcagcc ctgaagaaga gacc 24